

July 21, 2003

Mr. Victor Shields  
Industrial Coating Services, Inc.  
1102 West, 16<sup>th</sup> Street  
Indianapolis, Indiana 46202

Re: Registered Operation Status,  
097-15606-00254

Dear Mr. Shields:

The application from Industrial Coating Services, Inc., received on February 9, 1999, has been reviewed. Based on the data submitted and the provisions in 326 IAC 2-5.5, it has been determined that the following industrial coating application for small metal auto parts, to be located at 1102 West, 16<sup>th</sup> Street, Indianapolis, Indiana, 46202 is classified as registered:

- (a) One (1) powder coating room (identified as EU 02) consisting of two (2) powder coating booths each with a maximum process rate of twenty (20) pounds of powder coat per hour, controlled by dry filters and exhausting to stack ID 36 and 37. These units were installed in 1985.
- (b) One (1) burn-off oven (identified as EU 04) burning natural gas, with a maximum heat input capacity of 0.8 MMBtu per hour, controlled by an afterburner and exhausting to stacks ID 5. This unit was installed in 1985.
- (c) One (1) curing oven (identified as EU 03) burning natural gas, with a maximum heat input capacity of 2.32 MMBtu per hour and exhausting to stack ID 38. This unit was installed in 1985.
- (d) Eighteen (18) natural gas fired space heaters, with a combined heat input capacity of 2 MMBtu per hour and exhausting to stack ID 1, 2, 3, 9, 10, 14, 15, 16, 17, 19, 20, 21, 26, 29, 31, 33, 35, and 39. These units were installed in 1984.
- (e) Pre-treatment process using water based alkaline solutions for cleaning and surface preparation of small metal parts.

The following conditions shall be applicable:

- (a) Pursuant to 326 IAC 5-1-2 (Opacity Limitations) except as provided in 326 IAC 5-1-3 (Temporary Alternative Opacity Limitations), opacity shall meet the following:
  - (1) Opacity shall not exceed an average of thirty percent (30%) in any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.
  - (2) Opacity shall not exceed sixty percent (60%) for more than a cumulative total of 15 minutes (60 readings) in a 6-hour period as measured according to 40 CFR 60, Appendix A, Method 9 or fifteen (15) one (1) minute nonoverlapping integrated averages for a continuous opacity monitor in a six (6) hour period.

- (b) Pursuant to 326 IAC 6-3-2(e)(2) (Particulate Emission Limitations from Manufacturing Processes), particulate emissions from any process not already regulated by 326 IAC 6-1 or any New Source Performance Standard, and which has a maximum process weight rate less than 100 pounds per hour shall not exceed 0.551 pounds per hour. Therefore, the two (2) powder coating booths shall each not exceed 0.551 pounds per hour.
- (c) Any change or modification which would increase the potential to emit of a single HAP equal to or greater than ten (10) tons per year and any combination of HAPs equal to or greater than twenty-five (25) tons per year must receive prior approval from IDEM, OAQ and OES and shall be subject to the requirements of 326 IAC 2-7 (Part 70 Permit Program).
- (d) Pursuant to 326 IAC 4-2-2 (Incinerators), the burn-off oven shall:
  - (1) Consist of primary and secondary chambers or the equivalent;
  - (2) Be equipped with a primary burner unless burning wood products;
  - (3) Comply with 326 IAC 5-1 and 326 IAC 2;
  - (4) Be maintained, operated, and burn waste in accordance with the manufacturer's specifications or an operation and maintenance plan as specified in 326 IAC 4-2-2(c); and
  - (5) Not emit particulate matter in excess of five-tenths (0.5) pounds of particulate matter per one thousand (1,000) pounds of dry exhaust gas under standard conditions corrected to fifty percent (50%) excess air for incinerators.

If any of the above requirements are not met, the Permittee shall stop charging the incinerator until adjustments are made that address the underlying cause of the deviation.

This registration is the first air approval issued to this source. The source may operate according to 326 IAC 2-5.5.

An authorized individual shall provide an annual notice to the Office of Air Quality (OAQ) and Office of Environmental Services (OES) that the source is in operation and in compliance with this registration pursuant to 326 IAC 2-5.5-4(a)(3). The annual notice shall be submitted to:

**Compliance Branch  
Office of Air Quality  
100 North Senate Avenue  
P.O. Box 6015  
Indianapolis, IN 46206-6015**

**and**

**Office of Environmental Services  
Air Quality Management Services  
Compliance Data Group  
2700 Belmont Avenue, Indianapolis, Indiana 46221-2097**

no later than March 1 of each year, with the annual notice being submitted in the format attached.

An application or notification shall be submitted in accordance with 326 IAC 2 to the Office of Air Quality (OAQ) and Office of Environmental Services (OES) if the source proposes to construct new emission units, modify existing emission units, or otherwise modify the source.

OES has assigned the processing of this application to Eastern Research Group, Inc., (ERG). Therefore, questions should be directed to Ms. Sanobar Durrani, ERG, 1600 Perimeter Park Drive, Morrisville, North Carolina 27560, or call (919) 468-7810 to speak directly to Ms. Durrani. Questions may also be directed to Monica Dick of my staff at (317) 327-2512.

Sincerely,

Originally signed by

John B. Chavez  
Administrator

ERG/SD

cc: File - Marion County  
Marion County Health Department  
Air Compliance - Dick Sekula  
Permit Tracking - Sara Cloe  
Technical Support and Modeling - Michele Boner  
Compliance Branch - Karen Nowak  
OES - Monica Dick

<b>Registration Annual Notification</b>
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This form should be used to comply with the notification requirements under 326 IAC 2-5.5-4(a)(3)

<b>Company Name:</b>	<b>Industrial Coating Services, Inc.</b>
<b>Address:</b>	<b>1102 West, 16<sup>th</sup> Street</b>
<b>City:</b>	<b>Indianapolis, Indiana 46202</b>
<b>Authorized individual:</b>	<b>Victor Shields, E.H&amp;S Manager</b>
<b>Phone #:</b>	<b>(317) 322-7450</b>
<b>Registration #:</b>	<b>097-15606-00254</b>

I hereby certify that Industrial Coating Services, Inc. is still in operation and is in compliance with the requirements of Registration 097-15606-00254.

<b>Name (typed):</b>
<b>Title:</b>
<b>Signature:</b>
<b>Date:</b>

**Indiana Department of Environmental Management  
Office of Air Quality  
and  
Indianapolis Office of Environmental Services**

**Technical Support Document (TSD) for a Registration**

**Source Background and Description**

Source Name:	Industrial Coating Services, Inc.
Source Location:	1102 West, 16th Street, Indianapolis, Indiana 46202
County:	Marion
SIC Code:	3999
Operation Permit No.:	097-15606-00254
Permit Reviewer:	ERG/SD

The Indiana Department of Environmental Management (IDEM), Office of Air Quality (OAQ) and Indianapolis Office of Environmental Services (OES), have reviewed an application from Industrial Coating Services, Inc. relating to the operation of industrial coatings application for small metal auto parts.

**Unpermitted Emission Units and Pollution Control Equipment**

The source consists of the following unpermitted emission units and pollution control devices:

- (a) One (1) powder coating room (identified as EU 02) consisting of two (2) powder coating booths each with a maximum process rate of twenty (20) pounds of powder coat per hour, controlled by dry filters and exhausting to stacks ID 36 and 37. These units were installed in 1985.
- (b) One (1) burn-off oven (identified as EU 04) burning natural gas, with a maximum heat input capacity of 0.8 MMBtu per hour, controlled by an afterburner and exhausting to stack ID 5. This unit was installed in 1985.
- (c) One (1) curing oven (identified as EU 03) burning natural gas, with a maximum heat input capacity of 2.32 MMBtu per hour and exhausting to stack ID 38. This unit was installed in 1985.
- (d) Eighteen (18) natural gas fired space heaters, with a combined heat input capacity of 2 MMBtu per hour and exhausting to stack ID 1, 2, 3, 9, 10, 14, 15, 16, 17, 19, 20, 21, 26, 29, 31, 33, 35, and 39. These units were installed in 1984.
- (e) Pre-treatment process using water based alkaline solutions for cleaning and surface preparation of small metal parts.

**New Emission Units and Pollution Control Equipment Receiving Prior Approval**

There are no new construction activities included in this permit.

**Existing Approvals**

No previous approvals have been issued to this source.

### Enforcement Issue

- (a) IDEM is aware that equipment has been constructed prior to receipt of the proper permit. The subject equipment is listed in this Technical Support Document under the condition entitled Unpermitted Emission Units and Pollution Control Equipment.
- (b) IDEM is reviewing this matter and will take appropriate action. This proposed permit is intended to satisfy the requirements of the operation permit rules.

### Source Definition

Industrial Coating Services, Inc. consists of two (2) plants:

- (a) Plant 1 is located at 1102 West, 16<sup>th</sup> Street, Indianapolis, Indiana.
- (b) Plant 2 is located at 6233 Brookville Road, Indianapolis, Indiana.

The distance between the two (2) plants is approximately 12.5 miles and they operate under different SIC codes (SIC 3999 for plant 1 and SIC 3479 for plant 2). Although owned by one (1) company, they will not be considered as one (1) source due to the reasons stated above. The current review covers plant 1, located at 1102 West 16th Street, Indianapolis, Indiana 46202.

### Stack Summary

Stack ID	Operation	Height (feet)	Diameter (feet)	Length & Width Rectangular (feet)	Flow Rate (acfm)	Temperature (°F)
36	Powder Coating	7	--	2 x 2	--	77
37	Powder Coating	7	--	2 x 2	--	77
38	Curing Oven	11	--	0.83 x 0.83	--	350
05	Burn-Off Oven	30	16	--	--	--

### Recommendation

The staff recommends to the Commissioner that the operation be approved. This recommendation is based on the following facts and conditions:

Unless otherwise stated, information used in this review was derived from the application and additional information submitted by the applicant.

An application for the purposes of this review was received on February 22, 1999, with additional information received on April 3, 2003 and April 17, 2003.

### Emission Calculations

See Appendix A of this document for detailed emissions calculations (Appendix A, i.e. page 1 through 10).

### Potential To Emit of Source or Revision Before Controls

Pursuant to 326 IAC 2-1.1-1(16), Potential to Emit is defined as "the maximum capacity of a stationary source or emissions unit to emit any air pollutant under its physical and operational design. Any physical or operational limitation on the capacity of a source to emit an air pollutant, including air pollution control equipment and restrictions on hours of operation or type or amount of material combusted, stored, or processed shall be treated as part of its design if the limitation is

enforceable by the U. S. EPA, the department, or the appropriate local air pollution control agency.”

Pollutant	Potential To Emit (tons/year)
PM	21.3
PM10	21.3
SO <sub>2</sub>	0.01
VOC	8.34
CO	1.90
NO <sub>x</sub>	2.30

HAP's	Potential To Emit (tons/year)
Single HAP (Ti/Sb/Cr III Mixture)	3.65
Combination of HAPs	<25

- (a) The potential to emit (as defined in 326 IAC 2-7-1(29)) of criteria pollutants is less than 100 tons per year. Therefore, the source is not subject to the provisions of 326 IAC 2-7.
- (b) The potential to emit (as defined in 326 IAC 2-7-1(29)) of criteria pollutants is less than 25 tons per year. Therefore, the source is not subject to the provisions of 326 IAC 2-6.1.
- (c) The potential to emit (as defined in 326 IAC 2-7-1(29)) of PM and PM10 are greater than levels listed in 326 IAC 2-1.1-3(d)(1), therefore the source is subject to the provisions of 326 IAC 2-5.5.1. A registration will be issued.
- (d) The potential to emit (as defined in 326 IAC 2-7-1(29)) of any single HAP is less than ten (10) tons per year and the potential to emit (as defined in 326 IAC 2-7-1(29)) of a combination of HAPs is less than twenty-five (25) tons per year. Therefore, the source is not subject to the provisions of 326 IAC 2-7.
- (e) Fugitive Emissions  
Since this type of operation is not one of the twenty-eight (28) listed source categories under 326 IAC 2-2 and since there are no applicable New Source Performance Standards that were in effect on August 7, 1980, the fugitive particulate matter (PM) and volatile organic compound (VOC) emissions are not counted toward determination of PSD applicability.

### County Attainment Status

The source is located in Marion County.

Pollutant	Status
PM10	Attainment
SO <sub>2</sub>	Maintenance Attainment
NO <sub>2</sub>	Attainment
Ozone	Maintenance Attainment
CO	Attainment
Lead	Unclassifiable

- (a) Volatile organic compounds (VOC) are precursors for the formation of ozone. Therefore, VOC emissions are considered when evaluating the rule applicability relating to the ozone standards. Marion County has been designated as attainment or unclassifiable for ozone. Therefore, VOC emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2.

- (b) Marion County has been classified as attainment or unclassifiable for PM<sub>10</sub>, SO<sub>2</sub>, NO<sub>x</sub>, CO and Lead. Therefore, these emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2.
- (c) Fugitive Emissions  
Since this type of operation is not one of the 28 listed source categories under 326 IAC 2-2 or 326 IAC 2-3 and since there are no applicable New Source Performance Standards that were in effect on August 7, 1980, the fugitive particulate matter (PM) and volatile organic compound (VOC) emissions are not counted toward determination of PSD and Emission Offset applicability.

### Source Status

Existing Source PSD Definition (emissions after controls, based on 8,760 hours of operation per year at rated capacity and/ or as otherwise limited):

Pollutant	Emissions (ton/year)
PM	21.3
PM10	21.3
SO <sub>2</sub>	0.01
VOC	8.34
CO	1.90
NO <sub>x</sub>	2.30

- (a) This existing source is not a major stationary source because no attainment regulated pollutant is emitted at a rate of 250 tons per year or more, and it is not in one of the 28 listed source categories.
- (b) These emissions were based on potential to emit calculations (see Appendix A).

### Part 70 Permit Determination

#### 326 IAC 2-7 (Part 70 Permit Program)

This existing source is not subject to the Part 70 Permit requirements because the potential to emit (PTE) of:

- (a) each criteria pollutant is less than 100 tons per year,
- (b) a single hazardous air pollutant (HAP) is less than 10 tons per year, and
- (c) any combination of HAPs is less than 25 tons/year.

This status is based on the potential to emit calculations as shown in Appendix A.

### Federal Rule Applicability

- (a) This source is not subject to the New Source Performance Standard (NSPS), 326 IAC 12 (40 CFR 60.720, Subpart TTT - Standards of Performance for Industrial Surface Coating: Surface Coating of Plastic Parts for Business Machines), because the source does not coat plastic parts. The source only coats small automotive metal parts.

There are no other New Source Performance Standards (NSPS), 326 IAC 12, (40 CFR 60) applicable to this source.



There are no National Emission Standard for Hazardous Air Pollutant (NESHAPs) (326 IAC 14 and 40 CFR 63) applicable to this source.

### **State Rule Applicability - Entire Source**

#### **326 IAC 2-2 (Prevention of Significant Deterioration (PSD))**

This source was a minor source when it was built in 1985 and is not in one (1) of the twenty-eight (28) listed source categories. This source has not been modified since its construction. The potential to emit of each criteria pollutant from the entire source is less than 250 tons per year. Therefore, the requirements of 326 IAC 2-2 are not applicable.

#### **326 IAC 2-4.1 (Major Sources of Hazardous Air Pollutants (HAP))**

The existing facilities are not subject to the provisions of 326 IAC 2-4.1 because they were constructed prior to the July 27, 1997, the applicability date for this rule.

#### **326 IAC 2-6 (Emission Reporting)**

This source is located in Marion County and the potential to emit of VOC is less than ten (10) tons per year. Therefore, 326 IAC 2-6 does not apply.

#### **326 IAC 5-1 (Opacity Limitations)**

Pursuant to 326 IAC 5-1-2 (Opacity Limitations), except as provided in 326 IAC 5-1-3 (Temporary Alternative Opacity Limitations), opacity shall meet the following, unless otherwise stated in this permit:

- (a) Opacity shall not exceed an average of thirty percent (30%) in any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.
- (b) Opacity shall not exceed sixty percent (60%) for more than a cumulative total of fifteen (15) minutes (sixty (60) readings) as measured according to 40 CFR 60, Appendix A, Method 9 or fifteen (15) one (1) minute nonoverlapping integrated averages for a continuous opacity monitor in a six (6) hour period.

#### **326 IAC 6-1-2 (Nonattainment Area Limitations)**

Industrial Coatings Services, Inc. is not subject to the requirements of 326 IAC 6-1-2 because this source does not have either a potential to emit of particulate matter (PM) greater than one hundred (100) tons per year or actual emissions of particulate matter (PM) greater than ten (10) tons per year.

#### **326 IAC 6-1-12 (Marion County Particulate Limitations)**

Industrial Coatings Services, Inc. is not subject to the requirements of 326 IAC 6-1-12 because it is not one of the listed sources.

#### **326 IAC 8-6 (Organic Solvent Emission Limitations)**

Industrial Coatings Services, Inc. is not subject to the requirements of 326 IAC 8-6 because the potential to emit of VOC is less than one hundred (100) tons per year.

### **State Rule Applicability - Two (2) Powder Coating Booths**

#### **326 IAC 6-3 (Particulate Emission Limitations from Manufacturing Processes)**

Pursuant to 326 IAC 6-3-2(e)(2), particulate emissions from any process not already regulated by 326 IAC 6-1 or any New Source Performance Standard and which has a maximum process weight rate less than 100 pounds per hour shall not exceed 0.551 pounds per hour. Therefore, the two (2) powder coating booths shall each not exceed 0.551 pounds per hour.

Visible emission notations are not required for the dry filters controlling the two (2) powder coating booths because they have allowable particulate emissions pursuant to 326 IAC 6-3-2 that are low.

**326 IAC 8-2-9 (Miscellaneous Metal Coating)**

The two (2) powder coating booths (identified as EU 02) are not subject to the requirements of 326 IAC 8-2-9 because powder coatings do not have any VOC emissions.

**State Rule Applicability - One (1) Burn-Off Oven Used for Rack Cleaning**

**326 IAC 4-2-2 (Incinerators)**

This source is subject to the requirements of 326 IAC 4-2-2 (Incinerators) because the burn-off oven is used for bake cleaning of coated racks. Pursuant to 326 IAC 4-2-2 (Incinerators) the burn off oven shall:

- (a) Consist of primary and secondary chambers or the equivalent;
- (b) Be equipped with a primary burner unless burning wood products;
- (c) Comply with 326 IAC 5-1 and 326 IAC 2;
- (d) Be maintained, operated, and burn waste in accordance with the manufacturer's specifications or an operation and maintenance plan as specified in 326 IAC 4-2-2(c); and
- (e) Not emit particulate matter in excess of five-tenths (0.5) pounds of particulate matter per one thousand (1,000) pounds of dry exhaust gas under standard conditions corrected to fifty percent (50%) excess air for incinerators.

If any of the above requirements are not met, the Permittee shall stop charging the incinerator until adjustments are made that address the underlying cause of the deviation.

**State Rule Applicability - One (1) Curing Oven and Eighteen (18) Space Heaters, Pretreatment Process**

There are no specifically applicable regulations applicable to these emission units.

**Conclusion**

The operation of this industrial coating application for small metal auto parts shall be subject to the conditions of the attached proposed Registration 097-15606-00254.

**Appendix A: Emission Calculations**  
**Natural Gas Combustion Only**  
**MMBTU/HR<100**  
**Curing Oven**

**Company Name:** Industrial Coating Services, Inc.  
**Address:** 1102 West 16th Street, Indianapolis, IN 46202  
**Registration:** 097-15606  
**Pit ID:** 097-00254  
**Reviewer:** ERG/SD  
**Date:** May 22, 2003

Total Heat Input Capacity  
MMBtu/hr

2.32

Potential Throughput  
MMCF/year

20.3

Pollutant						
Emission Factor (lb/MMCF)	PM*	PM10*	SO <sub>2</sub>	NO <sub>x</sub>	VOC	CO
	7.6	7.6	0.6	100.0 **see below	5.5	84.0
Potential To Emit (tons/year)	0.08	0.08	0.006	1.02	0.06	0.85

\*PM and PM10 emission factors are filterable and condensable PM and PM10 combined.

\*\*Emission Factors for NO<sub>x</sub>: Uncontrolled = 100, Low NO<sub>x</sub> Burner = 50, Low NO<sub>x</sub> Burners/Flue gas recirculation = 32

#### **METHODOLOGY**

All Emission factors are based on normal firing.

MMBtu = 1,000,000 Btu

MMCF = 1,000,000 Cubic Feet of Gas

Emission Factors from AP-42, Chapter 1.4, Tables 1.4-1, 1.4-2, and 1.4-3, SCC #1-02-006-02, 1-01-006-02, 1-03-006-02, and 1-03-006-03 (July 1998).

Potential Throughput (MMCF/year) = Heat Input Capacity (MMBtu/hour) \* 8760 hours/year \* 1 MMCF/1000 MMBtu

PTE (tons/year) = Throughput (MMCF/year) \* Emission Factor (lb/MMCF) \* 1ton//2000 lbs

See next page for HAPs emissions calculations.

**Appendix A: Emission Calculations**  
**Natural Gas Combustion Only**  
**MMBTU/HR<100**  
**Curing Oven**

**Company Name:** Industrial Coating Services, Inc.  
**Address:** 1102 West 16th Street, Indianapolis, IN 46202  
**Registration:** 097-15606  
**Pit ID:** 097-00254  
**Reviewer:** ERG/SD  
**Date:** May 22, 2003

HAPs - Organics

	Benzene	Dichlorobenzene	Formaldehyde	Hexane	Toluene
Emission Factor (lb/MMCF)	2.1E-03	1.2E-03	7.5E-02	1.8E+00	3.4E-03
Potential To Emit (tons/year)	2.13E-05	1.22E-05	7.62E-04	1.83E-02	3.45E-05

HAPs - Metals

	Lead	Cadmium	Chromium	Manganese	Nickel
Emission Factor (lb/MMCF)	5.0E-04	1.1E-03	1.4E-03	3.8E-04	2.1E-03
Potential To Emit (tons/year)	5.08E-06	1.12E-05	1.42E-05	3.86E-06	2.13E-05

Methodology is the same as previous page.

The five highest organic and metal HAPs emission factors as provided above are from AP-42, Chapter 1.4, Table 1-4.2, 1.4-3 and 1.4-4 (July, 1998)..  
 Additional HAPs emission factors are available in AP-42, Chapter 1.4.

**Appendix A: Emission Calculations**  
**Natural Gas Combustion Only**  
**MMBTU/HR<100**  
**BurnOff Oven**

**Company Name:** Industrial Coating Services, Inc.  
**Address:** 1102 West 16th Street, Indianapolis, IN 46202  
**Registration:** 097-15606  
**Pit ID:** 097-00254  
**Reviewer:** ERG/SD  
**Date:** May 22, 2003

Total Heat Input Capacity  
MMBtu/hr

0.80
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Potential Throughput  
MMCF/yr

7.0

Pollutant						
Emission Factor (lb/MMCF)	PM*	PM10*	SO <sub>2</sub>	NO <sub>x</sub>	VOC	CO
	7.6	7.6	0.6	100.0 **see below	5.5	84.0
Potential To Emit (tons/year)	0.03	0.03	0.002	0.35	0.02	0.29

\*PM and PM10 emission factors are filterable and condensable PM and PM10 combined.

\*\*Emission Factors for NO<sub>x</sub>: Uncontrolled = 100, Low NO<sub>x</sub> Burner = 50, Low NO<sub>x</sub> Burners/Flue gas recirculation = 32

#### **METHODOLOGY**

All Emission factors are based on normal firing.

MMBtu = 1,000,000 Btu

MMCF = 1,000,000 Cubic Feet of Gas

Emission Factors from AP-42, Chapter 1.4, Tables 1.4-1, 1.4-2, and 1.4-3, SCC #1-02-006-02, 1-01-006-02, 1-03-006-02, and 1-03-006-03 (July 1998).

Potential Throughput (MMCF) = Heat Input Capacity (MMBtu/hour) \* 8760 hours/year \* 1 MMCF/1000 MMBtu

PTE (tons/year) = Throughput (MMCF/year) \* Emission Factor (lb/MMCF) \* 1ton//2000 lbs

See next page for HAPs emissions calculations.

**Appendix A: Emission Calculations**  
**Natural Gas Combustion Only**  
**MMBTU/HR<100**  
**BurnOff Oven**

**Company Name:** Industrial Coating Services, Inc.  
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HAPs - Organics

Emission Factor (lb/MMCF)	Benzene 2.1E-03	Dichlorobenzene 1.2E-03	Formaldehyde 7.5E-02	Hexane 1.8E+00	Toluene 3.4E-03
Potential To Emit (tons/year)	7.36E-06	4.20E-06	2.63E-04	6.31E-03	1.19E-05

HAPs - Metals

Emission Factor (lb/MMCF)	Lead 5.0E-04	Cadmium 1.1E-03	Chromium 1.4E-03	Manganese 3.8E-04	Nickel 2.1E-03
Potential To Emit (tons/year)	1.75E-06	3.85E-06	4.91E-06	1.33E-06	7.36E-06

Methodology is the same as previous page.

The five highest organic and metal HAPs emission factors as provided above are from AP-42, Chapter 1.4, Table 1-4.2, 1.4-3 and 1.4-4 (July, 1998)..  
 Additional HAPs emission factors are available in AP-42, Chapter 1.4.

**Appendix A: Emission Calculations**  
**Natural Gas Combustion Only**  
**MMBTU/HR<100**  
**Eighteen (18) Space Heaters**

**Company Name:** Industrial Coating Services, Inc.  
**Address:** 1102 West 16th Street, Indianapolis, IN 46202  
**Registration:** 097-15606  
**Plt ID:** 097-00254  
**Reviewer:** ERG/SD  
**Date:** May 22, 2003

Total Heat Input Capacity  
MMBTu/hr

Potential Throughput  
MMCF/yr

2.05 (18 units total)

18.0

Pollutant						
Emission Factor (lb/MMCF)	PM*	PM10*	SO2	NO <sub>x</sub>	VOC	CO
	7.6	7.6	0.6	100.0 **see below	5.5	84.0
Potential To Emit (tons/year)	0.07	0.07	0.005	0.90	0.05	0.75

\*PM and PM10 emission factors are filterable and condensible PM and PM10 combined.

\*\*Emission Factors for NO<sub>x</sub>: Uncontrolled = 100, Low NO<sub>x</sub> Burner = 50, Low NO<sub>x</sub> Burners/Flue gas recirculation = 32

#### **METHODOLOGY**

All Emission factors are based on normal firing.

MMBTu = 1,000,000 Btu

MMCF - 1,000,000 Cubic Feet of Gas

Emission Factors from AP-42, Chapter 1.4, Tables 1.4-1, 1.4-2, and 1.4-3, SCC #1-02-006-02, 1-01-006-02, 1-03-006-02, and 1-03-006-03 (July 1998).

Potential Throughput (MMCF) = Heat Input Capacity (MMBTu/hour) \* 8760 hours/year \* 1 MMCF/1000 MMBtu

PTE (tons/year) = Throughput (MMCF/year) \* Emission Factor (lb/MMCF) \* 1ton//2000 lbs

See next page for HAPs emissions calculations.

**Appendix A: Emission Calculations**  
**Natural Gas Combustion Only**  
**MMBTU/HR<100**  
**Eighteen (18) Space Heaters**

**Company Name:** Industrial Coating Services, Inc.  
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**Date:** May 22, 2003

HAPs - Organics

	Benzene 2.1E-03	Dichlorobenzene 1.2E-03	Formaldehyde 7.5E-02	Hexane 1.8E+00	Toluene 3.4E-03
Emission Factor (lb/MMCF)					
Potential To Emit (tons/year)	1.89E-05	1.08E-05	6.73E-04	1.62E-02	3.05E-05

HAPs - Metals

	Lead 5.0E-04	Cadmium 1.1E-03	Chromium 1.4E-03	Manganese 3.8E-04	Nickel 2.1E-03
Emission Factor (lb/MMCF)					
Potential To Emit (tons/year)	4.49E-06	9.88E-06	1.26E-05	3.41E-06	1.89E-05

Methodology is the same as previous page.

The five highest organic and metal HAPs emission factors as provided above are from AP-42, Chapter 1.4, Table 1-4.2, 1-4-3 and 1-4-4 (July, 1998)..  
 Additional HAPs emission factors are available in AP-42, Chapter 1.4.



**Appendix A: Emission Calculations  
PM/PM10 Emissions  
From Two (2) Powder Coating Booths**

**Company Name:** Industrial Coating Services, Inc.

**Address:** 1102 West 16th Street, Indianapolis, IN 46202

**Registration:** 097-15606

**Pit ID:** 097-00254

**Reviewer:** ERG/SD

**Date:** May 22, 2003

Max. Throughput Rate (lbs/hr)	Weight % Solids	Transfer Efficiency (%)	PTE *PM/PM10 (tons/year)
40	100%	90%	17.5

\*Assume all PM emissions are equal to PM10 emissions

Note: These units are controlled by dry filters with 99 % control efficiency and the coating is applied using electrostatic spray guns.

**METHODOLOGY**

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PTE PM/PM10 (tons/year) = Maximum Throughput Rate (lb/hour) \* Weight % Solids \* 8760 hours/year \* 1ton/2000 lbs \* (1-Transfer Efficiency %)

**Appendix A: Emission Calculations**  
**HAP Emissions**  
**From Natural Gas Fired Burn-Off Oven (Rack Cleaning)**

**Company Name:** Industrial Coating Services, Inc.  
**Address:** 1102 West 16th Street, Indianapolis, IN 46202  
**Registration:** 097-15606  
**Plt ID:** 097-00254  
**Reviewer:** ERG/SD  
**Date:** May 22, 2003

Material	Maximum Usage Rate		Potential HAPs (ton/year)
	(lb/day)	(lb/hr)	
Poly-Isocyanurate	5.00	0.417	1.83
Ti/Sb/Cr III Mixture	10.00	0.833	3.65
Ni/Sb/Ti Mixture	5.00	0.417	1.83
Isophorone Di-isocyanate	5.0E-05	0.000	1.83E-05
1,3,5 Triglycidyl Isocyanurate	2.50	0.208	0.91
<b>TOTAL POTENTIAL EMISSIONS (tons/year) =</b>			<b>8.21</b>

**Individual HAP (Ti/Sb/Cr III Mixture) = 3.65 tons/year**  
**Combination of HAPs = 8.21 tons/year**

**NOTE:** HAPs PTE based on worse-case coating material

**METHODOLOGY**

Maximum Usage Rate (lb/hour) = Max. usage rate (lbs/day) \* 1 day/12 hours of Operation

PTE HAPS (tons/year) = Max. usage rate (lb/hour) \* 8760 hours/year \* 1 ton/2000 lbs

**Appendix A: Emission Calculations**  
**PM/PM10 Emissions**  
**From Natural Gas Fired Burn-Off Oven (Rack Cleaning)**

**Company Name:** Industrial Coating Services, Inc.  
**Address:** 1102 West 16th Street, Indianapolis, IN 46202  
**Registration:** 097-15606  
**Plt ID:** 097-00254  
**Reviewer:** ERG/SD  
**Date:** May 22, 2003

Number of Racks Cleaned Per Burn:	50.0
Number of Burns Per Week:	2.00
Pounds of Paint Removed Per Burn:	0.50
PTE PM/PM10 (lbs/week):	50.0
PTE PM/PM10 (lbs/hour):	0.83
PTE PM/PM10 (tons/year):	3.65
<b>Total Potential Emissions (tons/year) =</b>	<b>3.65</b>

**METHODOLOGY**

PTE PM/PM10 (lbs/week) = No of racks cleaned per burn \* No.of burns/week \* Pounds of paint removed per burn

PTE PM/PM10 (lbs/hour) = No. of racks cleaned/burn \* No. of burns/week \* Pounds of paint removed per burn \* 1 week/ 5days \* 1 day/12 hours

PTE PM/PM10 (tons/year) = No. of racks cleaned per burn \* No. of burns/week \* Pounds of paint removed/burn \* 1 week/5days \* 1day/12hours \*8760 hours/year \* 1ton/2000 lbs

**Appendix A: Emission Calculations  
Summary Emissions**

**Company Name:** Industrial Coating Services, Inc.

**Address:** 1102 West 16th Street, Indianapolis, IN 46202

**Registration:** 097-15606

**Plt ID:** 097-00254

**Reviewer:** ERG/SD

**Date:** May 22, 2003

**POTENTIAL TO EMIT IN TONS PER YEAR BEFORE CONTROLS**

	PM	PM10	SO <sub>2</sub>	NO <sub>x</sub>	VOC	CO	Single HAP	Combined HAP
Curing Oven	0.08	0.08	0.01	1.02	0.06	0.85	negligible	negligible
18 Space Heaters	0.07	0.07	0.01	0.90	0.05	0.75	negligible	negligible
2 Powder Coating Booths	17.5	17.5						
Rack Cleaning (Burn-Off Oven)	3.68	3.68	0.002	0.35	8.23	0.29	3.65	8.21
TOTAL	21.3	21.3	0.01	2.3	8.34	1.90	3.65	8.21